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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,504	08/29/2001	Shean-Guang Chang	BEAS-01063US1	9220

23910 7590 06/12/2007

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EXAMINER	
SHINGLES, KRISTIE D	
ART UNIT	**PAPER NUMBER**
2141	

MAIL DATE	DELIVERY MODE
06/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/942,504	CHANG ET AL.	
	Examiner	Art Unit	
	Kristie D. Shingles	2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment
Claims 1 and 6 have been amended.

Claims 1-30 are pending.

Response to Arguments

I. Applicant's arguments, see Remarks filed 4/4/2007, with respect to the rejection of claims 1-30 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground of rejection is made in view of *Subbiah et al* (US 6,538,992).

Claim Rejections - 35 USC § 103

II. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

III. **Claims 1-4, 6-10, 14-17 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Subbiah et al* (US 6,538,992) in view of *Briscoe et al* (US 2005/0286488).**

a. **Per claim 1**, *Subbiah et al* teach the system for providing two qualities of service from a single data stream, comprising:

- a storage space for storing at least one of a first quality of service choice and a second quality of service choice for each of a plurality of users (*col.2 lines 42-62,*

col.3 lines 18- 28, col.5 lines 31-36, col.6 lines 59-64—storing the users QoS choice in memory); and

- a processor programmed to direct the data stream for each user according to that user's quality of service choice (*col.5 lines 1-44, col.6 lines 59-64*);

Although *Subbiah et al* fail to explicitly teach the multicasting apparatus that receives the data stream from the processor and multicasts the data stream to each user for which the first quality of service choice is stored in said storage space; and a point-to-point device that receives the data stream from the processor and ensures that each user for which the second quality of service is stored in said storage space receives the data stream. *Subbiah et al*'s teaching of multiplexing data streams from different users on a single ATM connection or transporting data packets individually according to users' QoS (*col.3 line 43-622, col.4 lines 50-55, col.6 lines 30-34, col.9 lines 10-25*), achieves the functionality of the above limitations. Nonetheless, *Briscoe et al* explicitly teaches supporting multiple QoS levels for customers, wherein multicast and unicast services are provided to customers based on their QoS (*page 2 paragraph 0028, pages 8-9 paragraph 0120*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Subbiah et al* and *Briscoe et al* for the purpose of providing a storage space for maintaining the type quality of service specific to each user and providing separate multicasting and unicasting device capabilities in order to transmit packets according to their associated QoS levels—wherein packets with a stringent QoS that requires immediate transmission are multicasted in order to adhere to the user's QoS parameters.

b. **Claims 8, 15 and 21-24** contain limitations that are substantially equivalent to claim 1 and are therefore rejected under the same basis.

c. **Per claim 2,** *Subbiah et al* and *Briscoe et al* teach the system according to claim 1, *Subbiah et al* further teach the system further comprising a listener adapted to listen for information sent in the data stream to one of the users of the system (*col.7 lines 1-37*).

d. **Claims 10 and 17** are substantially similar to claim 2 and are therefore rejected under the same basis.

e. **Per claim 3,** *Subbiah et al* and *Briscoe et al* teach the system according to claim 1, *Subbiah et al* further teach the system further comprising a single API for providing instructions to the processor for both qualities of service (*col.7 lines 46-67*).

f. **Per claim 4,** *Subbiah et al* and *Briscoe et al* teach the system according to claim 1, *Subbiah et al* further teach the system further comprising a thread of execution for each user selecting the multicast quality of service, the thread of execution listening on the user's behalf for a message on the multicast stream then delivering the message to the user (*col.5 lines 1-13, col.6 lines 60-64, col.7 lines 35-45*).

g. **Per claim 6,** *Subbiah et al* and *Briscoe et al* teach the system according to claim 1, *Subbiah et al* further teach the system wherein said storage space stores separate choices for each user for multiple data streams (*col.4 lines 56-62, col.5 lines 47-51, col.8 lines 3-5*).

IV. Claims 5, 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Subbiah et al* (US 6,538,992) in view of *Briscoe et al* (US 2005/0286488) in further view of *Lefebvre* (US 7,123,619).

a. **Per claim 5,** *Subbiah et al* and *Briscoe et al* teach the system according to claim 2 as applied above. *Subbiah et al* teach the use of queues for each specified QoS, allowing users to

specify different QoS parameters for different application services, and provisioning voice, data and/or video packets with different QoS requirements (*col.4 lines 56-62, col.5 lines 47-51, col.8 lines 3-5*), yet fails to explicitly teach the system further comprising a queue for each listener, allowing a user to receive messages for both qualities of service. However, *Lefebvre* specifically discloses users having the ability to transmit and receive data with different QoS with virtual channels allocated to each QoS (*col.1 lines 61-65, col.6 lines 59-61*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Subbiah et al* and *Briscoe et al* with *Lefebvre* for allowing user's to receive data with different QoS levels since users are known to transmit and receive different types of data, wherein different types of data such as voice and video require service constraints different from data such text and documents.

b. **Claims 11 and 18** are substantially similar to claim 5 and are therefore rejected under the same basis.

V. Claims 7, 9, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Subbiah et al* (US 6,538,992) in view of *Briscoe et al* (US 2005/0286488) in further view of *Henderson et al* (US 7,133,400).

a. **Per claim 7,** *Subbiah et al* and *Briscoe et al* teach the system according to claim 1 as applied above. *Subbiah et al* teach the allowing users to specify different QoS parameters for different application services, and provisioning voice, data and/or video packets with different QoS requirements (*col.4 lines 56-62, col.5 lines 47-51, col.8 lines 3-5*), yet fails to explicitly teach the system further comprising a filtering device allowing a user to filter out certain messages in the data stream. However, *Henderson et al* specifically teach implementing a

filtering engine that filters messages based on the user's QoS requirements (*col.10 lines 44-63*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Subbiah et al* and *Briscoe et al* with *Henderson et al* for provisioning a system that filters messages. Filtering is well-known in the art, wherein filtering techniques are commonly used in communications for secured transmissions to ensure data integrity.

b. **Claims 9, 14 and 16** are substantially similar to claim 7 and are therefore rejected under the same basis.

VI. Claims 12, 13, 19, 20 and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Subbiah et al* (US 6,538,992) in view of *Briscoe et al* (US 2005/0286488) in further view of *Baum et al* (US 6,850,495).

a. **Per claim 12,** *Subbiah et al* and *Briscoe et al* teach the method according to claim 8 as applied above, yet fail to further explicitly teach the method further comprising the step of tagging each message with a sequence number so that a user can tell if a message has been missed. However, *Baum et al* teach the use of sequence numbers in packet transmission for flow and error control (*col.2 lines 25-45, col.3 line 66-col.4 line 16 and col.5 line 5-col.6 line* 9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Subbiah et al* and *Briscoe et al* with *Baum et al* for the purpose of providing sequence numbers in packet messages in order to insure the proper reassembly of the packets at the receiving end. Utilizing sequence numbers in packet transmission protocols is a common and well-known technique in the art for providing flow and error control indicia.

b. **Claim 19** is substantially similar to claim 12 and is therefore rejected under the same basis.

c. **Per claim 13,** *Subbiah et al* and *Briscoe et al* teach the method according to claim 8 as applied above, yet fail to further explicitly teach the method further comprising the step of tagging each message so that a user can tell the data stream from which the message was received. However, *Baum et al* teach the use of sequence numbers in packet transmission for flow and error control (*col.17 lines 20-62, col.19 line 16-col.20 line 21 and col.23 line 25-col.24 line 12*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Subbiah et al* and *Briscoe et al* with *Baum et al* for the purpose of providing sequence numbers in packet messages in order to insure the proper reassembly of the packets at the receiving end. Utilizing sequence numbers in packet transmission protocols is a common and well-known technique in the art for providing flow and error control indicia.

d. **Claim 20** is substantially similar to claim 13 and is therefore rejected under the same basis.

e. **Per claim 25,** *Subbiah et al* and *Briscoe et al* teach the method according to claim 8 as applied above, yet fail to further explicitly teach the method wherein the step of ensuring that the user receives the message includes receiving a response which delivers an acknowledgement of the receipt of data from that user. However, *Baum et al* teach acknowledgement that are sent back from the receiving user (*col.2 lines 25-31, col.4 lines 9-16*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Subbiah et al* and *Briscoe et al* with *Baum et al* for the purpose of sending messages that acknowledge the receipt of data. Acknowledgement messages are

commonly used in the art to confirm the receipt of messages at the receiving terminal or destination.

f. **Claims 26-30** are substantially similar to claim 25 and are therefore rejected under the same basis.

Conclusion

VII. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Allan et al (6,788,696), Chase et al (7,120,150), Cheng et al (6,925,057), Purnadi et al (6,556,824), Zhang et al (6,999,432), Jorgensen (6,862,622), Shaffer et al (5,995,490), Shao et al (7,093,028).

VIII. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristie D. Shingles whose telephone number is 571-272-3888. The examiner can normally be reached on Monday 8:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kristie D Shingles
Examiner
Art Unit 2141

kds

RUPAL DHARIA
SUPERVISORY PATENT EXAMINER